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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,644	12/17/2003	Hiroyuki Ogi	118118	3825
25944	7590	12/30/2004	EXAMINER LE, DANG D	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			ART UNIT 2834	PAPER NUMBER

DATE MAILED: 12/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/736,644

Applicant(s)

OGI, HIROYUKI

Examiner

Dang D Le

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/17/03 &amp; 4/19/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Drawings***

1. Figure 11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, Figures 3, 4, 9, and 10 show only one pair of parallel connected two elements (55y1 and 55y3 in Figure 9, for example) and the remainders are constituted of a single element. This seems to contradict to the limitation recited at the last portion in claim 1.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Scott et al. (5,929,611).

Regarding claims 1 and 4, Scott et al. shows an ac generator for a vehicle comprising:

- A rotor (220) for providing a magnetic field;
- A stator (210), disposed around said rotor, said stator having a stator core in which a plurality of phase-windings is mounted to generate electromotive force when the magnetic field is supplied; and
- A rectifying unit (706, Figure 7C) formed by a bridge circuit which includes positive electrode side rectifying elements and negative electrode side rectifying elements respectively connected to the plurality of phase-windings;
- Wherein one of the positive electrode side rectifying element and negative electrode side rectifying element connected to at least a portion of the plurality of phase-windings is constituted of a single element (portion 702) and the remainders are constituted of parallel connected two elements (portion 704).

6. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Frister (4,383,215).

Regarding claims 1 and 4, Frister shows an ac generator for a vehicle comprising:

- A rotor (not shown) for providing a magnetic field;
- A stator, disposed around said rotor, said stator having a stator core in which a plurality of phase-windings (PHW) is mounted to generate electromotive force when the magnetic field is supplied; and
- A rectifying unit (Figure) formed by a bridge circuit which includes positive electrode side rectifying elements and negative electrode side rectifying elements respectively connected to the plurality of phase-windings;
- Wherein one of the positive electrode side rectifying element and negative electrode side rectifying element connected to at least a portion of the plurality of phase-windings is constituted of a single element and the remainders are constituted of parallel connected two elements (ZSD1 and right HGR, ZSD2 and left HGR).

7. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Domann (3,571,657).

Regarding claim 1, Domann shows an ac generator for a vehicle comprising:

- A rotor (not shown) for providing a magnetic field;
- A stator, disposed around said rotor, said stator having a stator core in which a plurality of phase-windings (U, V, W) is mounted to generate electromotive force when the magnetic field is supplied; and

- A rectifying unit (Figure 1) formed by a bridge circuit which includes positive electrode side rectifying elements and negative electrode side rectifying elements respectively connected to the plurality of phase-windings;
- Wherein one of the positive electrode side rectifying element and negative electrode side rectifying element connected to at least a portion of the plurality of phase-windings is constituted of a single element (9, 11, 13) and the remainders are constituted of parallel connected two elements (8, 10, 12 with 23).

Regarding claims 2-4, it is noted that Domann also shows the zener diodes (12, 13) and the normal diodes (8-11 and 23).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Domann in view of Ooiwa et al. (6,184,602) and Drabik (3,739,209).

Regarding claims 5-8, Domann shows all of the limitations of the claimed invention except for the small and large diameters and the plurality of heat sinks.

Ooiwa et al. shows the heat sink with small and larger diameter (501 and 503, Figure 1) for the purpose of reducing more heat.

Drabik shows the plurality of heat sinks (42, 44, 46) also for the purpose of reducing more heat.

Since Domann, Ooiwa et al., Drabik are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the heat sinks with different diameter and to use many heat sinks as respectively taught by Ooiwa et al. and Drabik for the purpose discussed above.

***Information on How to Contact USPTO***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/21/04

A handwritten signature in black ink, appearing to read "Dangle L. H.", is centered on the page.

DANGLE  
PRIMARY EXAMINER